

IN THE CLAIMS:

Amend Claims 1-3, 6, 8, 16, 21, 28 and 29 as follows:

1. (Currently amended) A welding method for gas metal arc welding with continuous electrode feeding, comprising the steps of
 - conducting spray arc welding,
 - conducting short pulsing welding for separating off essentially one droplet per pulse,
 - alternating cyclically between the short pulsing welding and spray arc welding without intentionally extinguishing the arc in between the short pulsing welding and spray arc welding, and
 - pre-programming duration or time for at least one of the short pulsing welding and spray arc welding prior to beginning.
2. (Currently amended) The welding method as claimed in claim 1, comprising determining the duration or time for the pulsing by a frequency for cyclic alternating between the pre-programmed short pulsing welding and spray arc welding which are pre-programmed.
3. (Currently amended) A welding power source for MIG/MAG welding comprising a first process regulator for initiating and controlling spray arc welding, a second process regulator for initiating and controlling short pulsing welding for separating off essentially one droplet per pulse,
 - means for alternating cyclically between the spray arc welding and short pulsing welding, and
 - means for pre-programming duration or time of said short pulsing welding and spray arc welding prior to commencement of welding.
4. (Previously Presented) The welding power source as claimed in claim 3, wherein

the pre-programming means comprises a timer settable for durations or times of 25 to 1000 ms.

5. (Previously Presented) The welding power source as claimed in claim 4, wherein the pre-programming means comprises a timer settable for durations or times of 50 to 300 ms.

6. (Currently Amended) The welding power source as claimed in claim 3, wherein the pre-programming means also comprises a setting device with special support for facilitating programming of a first phase with setting data for parameters of the short arc or spray arc welding parameters, and a second phase with setting data for parameters of the short pulsing welding.

7. (Previously Presented) The welding power source as claimed in claim 6, wherein the pre-programming means also comprises a setting device with special support for facilitating programming of the cyclic alternating between the first and second phases.

8. (Currently amended) A control box connectable to a welding source as claimed in claim 3, additionally comprising a setting device with special support for facilitating programming of a first phase with setting data for spray arc parameters of the spray arc welding, and a second phase with setting data for parameters of the short pulsing welding.

9. (Previously Presented) The control box as claimed in claim 8, comprising a setting device with special support for facilitating programming of the cyclic alternating between the first and second phases.

Claims 10-15. Canceled

16. (Currently Amended) A control box connectable to a welding set including a welding power source for MIG/MAG welding comprising

a first process regulator for initiating and controlling spray arc welding,
a second process regulator for initiating and controlling short pulsing welding for
separating off essentially one droplet per pulse,

means for alternating cyclically between the spray arc welding and short pulsing
welding, and

means for pre-programming duration or time of said short pulsing welding and
spray arc welding prior to commencement of welding.

the pre-programming means also comprises a setting device with special
support for facilitating programming of a first phase with setting data for spray arc
parameters, and a second phase with setting data for the short pulsing welding.

17. (Previously Presented) The control box as claimed in claim 16,
comprising a setting device with special support for facilitating programming of the
alternating between the first and second phases.

Claims 18-20. Canceled

21. (Currently Amended) The welding power source as claimed in claim 3, wherein
said means for cyclically alternating between said short pulsing welding and spray arc
welding includes means for determining the duration or time for the pulsing based upon
frequency for cyclic alternating between the pre-programmed short pulsing welding and
spray arc welding.

Claim 22. Canceled

23. (Previously Presented) The welding method as claimed in claim 1, wherein said
short pulsing welding is conducted by periodically increasing welding current to a pulse
current of size and length so that current density in a welding electrode creates
sufficient electromagnetic force to separate off one droplet per pulse.

24. (Previously Presented) The welding method as claimed in claim 23, wherein the welding current forms a bell curve above background current for each pulse, with the droplet separating at a peak current value for each pulse.

Claim 25. Canceled

26. (Previously Presented) The welding power source as claimed in claim 3, wherein said second process regulator controls said short pulsing welding by periodically increasing welding current to a pulse current of size and length such that current density in a welding electrode creates sufficient electromagnetic force to separate off one droplet per pulse.

27. (Previously Presented) The welding power source as claimed in claim 26, wherein said second process regulator controls the welding current to form a bell curve above background current for each pulse, with the droplet separating at a peak current value for each pulse.

28. (Currently Amended) The welding method as claimed in claim 30 4, additionally comprising the steps of cyclically alternating between
pulsing between short arc welding and the short pulsing spray arc welding during
a root run, and
pulsing between the spray short arc welding and short pulsing welding during a
sealing run.

29. (Currently Amended) The control box as claimed in claim 31 3, additionally comprising means for pulsing cyclically alternating between short arc welding and the short pulsing spray arc welding during a root run, and pulsing between the spray short arc welding and short pulsing welding during a sealing run.

30. (Previously Presented) The welding method as claimed in claim 1, additionally comprising the step of

welding vertical V-joints in aluminum or stainless steel material 5-10 mm. thick without weaving.

31. (Previously Presented) The control box as claimed in claim 3, additionally comprising means for welding vertical V-joints in aluminum or stainless steel material 5-10 mm. thick without weaving.